

AN- <PR> JP 9885510 A 19950331|  
FD- JP 11277699 A B32B-027/34|  
LA- JP 11277699(8)|  
AB- <BASIC> JP 11277699 A

NOVELTY - A metal layer is laminated directly or through a heat-resistant adhesive agent, to an aromatic polyimide layer. Fine particles of inorganic filler are dispersed in the polyimide layer and at least one side of the polyimide layer is modified by plasma treatment, such that the content of volatile matter is 1 weight % or less.

DETAILED DESCRIPTION - The film has an aromatic polyimide layer consisting of aromatic tetracarboxylic acid component and aromatic diamine component essentially consisting of p-phenylene diamine. Fine particles of an inorganic filler are dispersed in polyimide layer. The thickness of the polyimide layer is adjusted to 5-150  $\mu$ m, such that the dimensional stability is favorable. At least one side of the polyimide layer is modified by plasma treatment, such that the content of volatile matter is 1 wt.% or less. A metal layer is laminated directly or through a heat-resistant adhesive agent, to the polyimide film.

USE - The mechanical, physical or chemical processed metal layer laminated polyimide film is used for electronic components (claimed).

ADVANTAGE - The adhesion between the metal layer and the polyimide film is improved and quality electronic components can be obtained using the polyimide film laminate.

Dwg.0/1|

DE- <TITLE TERMS> METAL; LAYER; LAMINATE; POLYIMIDE; FILM; ELECTRONIC; COMPONENT; PLASMA; TREAT; POLYIMIDE; FILM; LAMINATE; METAL; LAYER; HEAT ; RESISTANCE; ADHESIVE|

DC- A26; A35; A85; E14; L03; P73; V04; X12|

IC- <MAIN> B32B-027/34|

IC- <ADDITIONAL> B32B-015/08; C08K-003/00; C08L-079/08; H01B-003/30; H05K-001/03; H05K-003/38|

MC- <CPI> A05-J01B; A08-R01; A11-B09A2; A12-E01; E31-P03; L03-H04E4|

MC- <EPI> V04-R02; V04-R07; V04-R07L; V04-R07P1; X12-E02B|

FS- CPI; EPI; EngPI||

?s pn=jp 09214140

S5 1 PN=JP 09214140

?t s5/4/all

5/4/1

DIALOG(R) File 351:Derwent WPI

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IM- \*Image available\*

AA- 1997-463860/199743 |

XR- <XRAM> C97-147859|

XR- <XRPX> N97-386564|

TI- Multilayered printed circuit for electronic device - in which cementing layer having covalent bonded structure is formed on surface of insulating resin layer|

PA- TOPPAN PRINTING CO LTD (TOPP )|

NC- 001|

NP- 001|

PN- JP 9214140 A 19970815 JP 96268344 A 19961009 199743 B|

AN- <LOCAL> JP 96268344 A 19961009|

AN- <PR> JP 95310556 A 19951129|

FD- JP 9214140 A H05K-003/46|

LA- JP 9214140(9)|

AB- <BASIC> JP 9214140 A

The circuit consists of an insulating resin layer (4) and a conductor wiring layer (9) formed over an insulating substrate (1), orderly. The insulating layer is formed by plasma treatment/optical irradiation.

A cementing layer (6) having covalent bond structure of atoms is formed on the surface of insulating resin layer.